restraint to develop the ultimate tensile strength of the rail and minimizes the severity of an end impact. The W sections are attached to the light posts with ¼ inch bolts. Thus, when the posts are pushed down, the ¼ inch bolts fail and release the rail so that it remains at a constant elevation to prevent the car from rolling. The W section is designed for deflections up to eight feet.

In this test of a box beam designed as a median barrier, several views are shown to indicate the way the box beam reacts to absorb the impact and limit deceleration. The rail is a hollow, structural section 8 by 6 by ¼ inch, and is supported on light posts spaced six feet apart. The car impacted the barrier at fifty-five miles an hour and twenty-five degrees, and was redirected parallel to the barrier. In another test the car impacted the median barrier at forty-five miles an hour and thirty-five degrees. In both tests deflection was limited to five feet; this deflection was greater than desired. However the post/rail connection and rail splices were redesigned to provide the desired two foot deflection.

This recent installation of a box beam median barrier shows an effective end treatment. The barrier rail is not attached directly to the posts, but rests on paddles or plates bolted to the posts. These plates are inserted into the tube through slots in the bottom of the rail, and allow the posts to bend down when impaced directly by a colliding vehicle. Without a mechanical connection to the post, the rail remains at the desired elevation to prevent the car from rolling. Median barriers have been designed for allowable deflections of as little as two feet.